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Left Washington

April 4, 1892

Left Washington at 4 P.M. crossed the old Long Bridge and reached Pickwood a little after dark. No social change noted in character of country or flora. Hilly and woods when not cleared. *Pinus strobus* is most common. *Sycamore* + oaks and *hickory* + *Tulip* trees along streams. Some good farms, mostly poor shanties + delapidated places. A very warm day.

April 5. Got daylight as we reached Chadburn, N.C. All pine woods with little clearings + log houses. Level country sandy soil, some places of thick underbrush, swamps + flooded places some beautiful open woods.

A long lived pine + one with shorter leaves are in about equal abundance.

Saw a little Spanish Moss and after passing Marion it became abundant.

People were working tar near Marion.

The few junipers seen were all along fences or yards and may have been brought. Saw the first Cypress just north of Lanes. Phosphate works and beds about Charleston.

To Savannah

a big marsh and channel where the tide flows near Charleston, and a few miles south we saw the first little palm like plants probably Sybaldia, and live oaks. After crossing the Savannah River we went through some sand ridges running parallel with the river back a few miles from the bank. The highest were hardly 20 feet high but were dry and sandy & covered with timber. We saw a lot of Gopher hills on them, the first seen on the trip. It was probably 5 miles north of Savannah. Reached Savannah about 3 P.M. and had to wait till 7:20, tramped around town. It is a dilapidated old place with some buildings that have been good.

A warm day, up to 87° at 4 P.M. in Savannah. It seems like midsummer. Strawberries were ripe at Savannah. Reached McIntosh at 9 P.M. & staid all night at a farm house.

April 6. Got a man to take us out to Riceboro and started about 7 A.M. It is 10 miles to Riceboro and good roads all the way through woods.

Riceboro, Georgia

Reached Riceboro but could find no place to stay and were told that only some colored people were on or near the L.C. Cart Plantation.

Found a place a mile & a half S.W. of Riceboro and settled. Our maid had not arrived, so we had no traps to begin work with. There are little farms and patches cleared but most of the country is covered with thick timber and brush. Live oaks and pines, sweet gum and sycamore are the principal trees. Holly, cornus & laurel are common shrubs. The trees are loaded with Spanish moss. The land is nearly level. I should think there was hardly a rise of 10 feet in the form of hills or ridge. The tide comes up to Riceboro & past our stopping place.

Most of the white people have this location in summer as it is unhealthy to admit white people living here in warm weather. All the people are poor and lazy. Most of the whites live in old, tumbledown houses & seem to be about on a level with the negroes.

Riceboro

April 7

As our traps have not arrived we took our guns and went for birds and reptiles, intending to finish them up as far as possible before the traps come.

Killed a lot of birds & got some lizards and snakes. Made up skins. Shot bats in evening.

April 8, Hunted in forenoon, I got 2 Gray Squirrels & a Rabbit, some birds & a turtle & lizard. Loring got a squirrel & birds. Thompson found a big rattle snake & got some lizards & a turtle.

Our traps came & we set out a line of 41. All went together so as to give Loring and Thompson some pointers on setting traps. Found Westowa houses and some mouse holes. Did not get any bats.

We put 2 turtles & a King Snake & a Eutania & a Glass snake in a barrel. In the evening the King snake caught the glass snake & broke it in two and swallowed about 7 inches of its tail. We watched it catch and coil around and squeeze the snake until it broke in two then swallow the piece. It swallowed the piece in about 5 minutes. Then it caught the glass snake by the stump of its tail and swallowed about

Riccarton, Ga.

Touches of its body, then gave it up
and disgorged and freed the glass snake.

April 9

Went out traps and got one Sitoromys,
one Oryzomys, & one Neotoma. Set a lot
more traps. Shot an Alligator that measured
49 inches.

A cool day & chilly in evening.

April 10. Caught 2 Neotomas, Loring
caught the same & shot a Rabbit.

A cold day. Sunday.

April 11 Caught a Sitoromys, a ~~Blarina~~ & a ~~Thomomys~~
~~musculus~~, Loring caught an Opossum
with 7 young in her pouch, and a Neotoma
& young Rabbit. Thompson got one
Oryzomys. We made up the specimens &
in P.M. took a lot of traps and went
to the Le Conte place. Found signs of
Arvicolas, ~~Dasy~~ Oryzomys & ~~Petrodontomys~~
Scattered our traps well over the place.

It has been a fine plantation sometime
The house has ~~soon~~ tipped and broken &
is nearly ready to fall. Some fine shrubs
and trees stand in the yard. The ancestor of
the Le Conte Pear is a large tree spreading
some 50 feet. A pond in the yard contains lots of frogs.

April 12

Rained in the night,

Caught 2 Neotomas & 5 Sigmodonts & a Reithrodontomys. killed some birds & caught frogs & snakes. Loring got a Sitomys & 4 Neotomas, Thompson caught a Reithrodontomys & an Oroxonys & a Sigmodon & a black-headed snake.

Reset our traps and made up skins.

Shot a Red bellied Hawk from a nest but could not climb the tree.

A cool day. Saw but one bat & did not get it.

April 13, Got nothing new.

Warner, saw a few bats in evening but did not get one.

April 14, Caught some Sigmodonts, Sitomys, Reithrodontomys, & shot a *Lynx sylvaticus*.

Loring got an Oroxonys & some Neotomas.

Thompson found a nest with two eggs of a Megascops and saved both eggs & bird.

I got the eggs from nest of a *Buteo l. alleni*. Shot the bird day before yesterday as it flew from nest. It seems to be intermediate between *lividus* and *alleni*. The nest was about 75 feet high in a pine, eggs two.

I got daubed from head to foot with pitch. Caught a long, slender bluish snake,

Ricaboro

a boy brought us two water moccasons which I bought. While handling one of the Moccasons it struck the end of my finger with one of its front teeth so as to draw blood but no signs of poison resulted.

It has been a warm day and the first time for a week the bats flew in considerable numbers. We got 3, a *Vesperugo car. Atalapha*.

April 15. Took up most of my traps but set some now for Moles. Wrote on my report all the afternoon.

Thompson & Loring brought in their traps. They each caught 2 little *Blarinas* which we had not found before.

Loring & I each killed a *Lepus sylvaticus* in evening. Another cold day and we saw just one bat.

April 16 Took up the last of my traps caught nothing. Made up a Rabbit and packed specimens and packed our things and left for Mcintosh at 1:30 P.M. Arrived at the station at 3:30, a few minutes before the train and came as far as Waycross where we have to lay over for the next train. Saw lots of Geomys hills near Jessup. Country much the same but higher. Well at Waycross about 20 feet deep.

Waycross to Chattahoochee

April 17

Tramped around Waycross but found no signs of Geomys or other mammals, so concluded to go on to Chattahoochee and stop.

Left Waycross at noon and reached Chattahoochee at 5 P.M.

There were no live oaks or Spanish Moss at Waycross, we saw the last of them somewhere near Jessup. Did not see either again till we reached Chattahoochee. Geomys hills were seen occasionally on high ground from Jessup to Chattahoochee. Are most numerous near Chattahoochee. The country is slightly rolling, some of the hills are 20 feet high and one may be 40 feet high. Pine woods covers most of the way except scattering farms. We crossed the region that lies above 100 feet altitude. Most of the soil was sandy, some red sand & clay.

A warm day.

April 18 Had to go $2\frac{1}{2}$ miles back along the R.R. to find Geomys hills, but found some fresh ones and set traps for them. Loring set traps off south of town.

Went to my traps in evening and got one
Geomys. Shot a Vesperugo. Loring shot
a *Lepus sylvaticus*. Got 2 *Scaloporus*.
Found holes of the turtle which burrows
It is called a gopher. Set traps for it.
There are a few Live oaks here. *Quercus*
cinerascens is common. It was common at
Waycross. *Pinus nutans*, *taeda*, & *palustris*
& *Taxodium disticum*, Sweet gum, *Juniperus*
virginiana, *Sabal serrulata adansonii*,
& *Yucca filamentosa* are common.
Spanish moss is common along the streams.

April 19 Went out to traps early in morning
got 2 Geomys & 3 *Signomys*. None of my traps
in the woods were sprung and Loring got
nothing in his traps which were all in the
woods. Skinned the mammals and were
ready to start on the 10 o'clock train but
it left while we were waiting for the ticket
agent to appear so we could get ticket &
have our baggage checked. Had to wait
till the next train at 5 P.M.

Could not do much work so loaded some auto.
cartridges and hunted part of the day.

It did not get dark till we reached Chipley
S. Scarp hills along the R.R. until Cork
Saw no more live oaks or Spanish Moss after leaving
the Chattahoochee R. The country is mostly

open pine woods, some swamps, quite
rolling, soil good, mostly reddish & clayey.
Some good looking farms and orchards.

April 20, Woke up near Scranton, Miss.

Found plenty of live oaks and Spanish moss
all along R.R. A low, flat country to Bay
St. Louis with some marshes and inlets.

Arrived at Bay St. Louis at 6 A.M.
Had to wait till 8 for the P.O. to open.

Received some letters of instructions.
Loring packed & shipped 3 boxes of specimens.
then packed his things and started for New Orleans
at 3 P.M. I took gun and tramped in woods
till after dark. Saw one Coon but did
not get it. Saw several bats but did
not get anything. The woods are bare
the country is flat & mammal life scarce.

Found some swamps that may contain game.

3 pines are common, also numerous
virginiana, *Magnolia grandiflora*, *Gum*
nigra & a live oak, *Star Liquidambar* &
Taxodium, *Sabal adansonii* & *Mitchella*
repens. A few *Magnolia* flowers are just
opening. Chive trees are in blossom, some mul-
berries are ripe. A tall *Yucca* in yard is
in blossom.

A hot day except on edge of gulf when
wind blows.

Ba. - Lower 1000.

April 21 George A. Coleman came last night at 10 o'clock. I met him this morning. It rained all day but about 5 minutes, & rained hard much of the time. We could not get out to do any work.

It is so damp that our specimens don't dry but would & our guns rust badly.

April 22 Rained all night and part of forenoon.

We took a long tramp through the woods & waded in water half the way, sometimes nearly to our knees. The streams and water courses were all full and overflowing. Water stands from a few inches to a foot deep over half of the woods. It would be difficult for any small animal to live in the woods except in trees. We found *Sceloporus* common on trees over the water. In P.M. we got a boat and rowed across the bay to the point on east side. Hunted in the woods but found no signs of mammals. Caught a fair of Cottonmouths and a lot of lizards & some frogs. Got some birds and shot bats in evening.

Mr. Coleman killed an *Antrostomus carolinensis*. Set a few traps but do not expect to catch anything. Moved from the Bay St. Louis Hotel out to a house in the woods on back side of town.

Chased up & is pleasant.

Bay St. Louis,

April 23

Did not catch a thing in the traps we had out. Set a lot more. Shot birds & caught snakes and lizards. Found 3 Cottonmouths & a Moccasin. They all wanted to bite. The Moccasin had a *Neotoma*, hot half grown in its stomach & a young turtle. We were in the swamps most of the time. Coleman found a small red & black snake, very pretty. We could not find any sign of mammals except a Coon track and Mole tracks.

A clear pleasant day.

April 24 Sunday -

Coleman found one *Sitomys* in a trap. My traps were empty. It began to rain about noon and kept it up the rest of the day.

April 25 Still raining hard in morning & did not stop till about 3 P.M.

Did not go to our traps till after noon & found nothing in them. Went back through woods about 3 miles to the place where Brimley used to stop. Learned something about the country and where to find dry ground. There are hills across on north side of Bay. Killed some birds & Bats. Got wet. Stopped raining but did not clear up. Walked all through the woods again.

Bay St. Louis, Miss.

April 24 Neither of us caught anything in our traps, except a water moccasin, took them up. Got a boat and crossed the bay to the north side to the Whitfield Place. where we found some high ground and a prospect of getting mammals.

Saw two Rabbits & caught an Opossum. Set a lot of traps, engaged board with Mr. Hyatt and he agreed to come over for us in the morning with his boat.

Worked till late getting the few specimens prepared and ready to pack up.

A clear, pleasant day.

April 27 Crossed the bay to Mr. Hyatt's place on north shore. Took all the forenoon to get across & settled.

I got a Neotoma in a trap & Colman got a Sitomys. Killed some birds: shot bats in evening but did not find them when killed. Cloudy, windy & warm.

April 28 Neither of us caught anything in traps. Colman got a Gray Squirrel & I found a Coon asleep up a pine tree and killed it & shot a bat in evening. Went farther up the bay and found some signs of Neotomas.

Cool & cloudy most of day.

April 29 Caught an Opossum & a Sitornys
& shot a Gray squirrel & a Vesperugo.
Coleman got a Squirrel & a Vesperugo.
Reset some of our traps. It rained hard
in the night and sprung many of our traps.
A clear & very pleasant day.

April 30

Crossed bay to get a telegram and had
to sail against a head wind so wasted
most of the P.M.

Caught 3 Neotomas & a Sitornys & shot some
birds.

May 1. Sunday - Found nothing but a
Sitornys in traps. took them up as I
will have to start in the morning to
cross the bay and will not have time
to go to them.

A clear, cool, pleasant day with a fresh
breeze from the gulf.

May 2 Started across the bay against a
head wind and were a good while in
crossing. I went to the hotel & wrote on
my report till train time. Met
Thompson at the train at 3 P.M.
and we proceeded to New Orleans
where we arrived at 5 o'clock & stopped
for the night.

New Orleans

On passing Pearl River, near the mouth we saw hundreds of Muskrat houses and now again in the big marsh about Lake Ponchartrain. Saw large tailed Grackles and Redwings and other marsh bird. Most of the country between Pearl River and New Orleans is marshy or lakes & bays.

Coleman staid at Hyatt's place on North side of Bay St. Louis to try for more *Neotomas*, for *Lepus aquaticus* & Flying squirrels! May stay there a week yet.

May
April 3 Went through the two markets - the French & American. Of game we found but 3 *Sciurus carolinensis*, 2 Cuckoos, a Redwing Blackbird, a *Turdus*, & a swallow. The birds were picked. The warm weather and game law excludes game at this season. Found lots of Bull-frogs & turtles.

Found Mr. Gustave Kohn at his office at 14 Coronellet St. He took us to his house and showed us his large collection of mammals, birds, turtles, fish and other things. He has 3 *Lepus aquaticus*, *Lepus sylvaticus*, about 12 Fox Squirrels of more than one species, (some from near New Orleans, one from Memphis, some from St. Louis, I think)

New Orleans to Terra Bonne

He has a Beaver, an Otter, several Mink, Coons, Passins, the skin of a Spilogale from Virginia, Tairnas from Virginia & from Canada, Geomys from Elk River, Mich., & from Colorado. *S. tridecemlineatus* from Colo., an *Arvicola austrius*, and *A. sapinus*, several *Sciuropterus* from near N. Orleans. One *Neotoma* from somewhere along the coast of the Gulf (very ^{not labeled} peculiar with white to rose & up along sides). *Sitomys gasseri*, *S. leucopus*, *S. aureolus* from La., *Reithrodontomys*, *Peromyscus* from Canada., *Atalapha cinnerea*, *Vesperugo noctivagus* from north, 2 *Vesperugo* & a *Nyctomyys* from New Orleans & also *Atalapha voobareensis* and *A. teliotis* from N. Orleans. Has 2 *Urocyons*, *Scalops* & *Sapirus*, *Sigmodon* and *Musk Rats*.

Turtles are the specialty of Mr. Kohls study. Left New Orleans at 5 P.M. but could get no farther than Terra Bonne tonight. From N. O. to Terra Bonne the land is flat & wet & far below the rivers. Great marshes, lagoons, & thick Cypress swamps form the landscape. Large fields of rice and sugar-cane grow along the R.R., the rice fields are mostly wet or flooded, the cane fields are a little above water. Vegetable farms extend out quite a distance from New Orleans.

Houwa

May 4. Came from Terra Bourne out to Houwa - 20 miles. Failed to find any place out in the country to stay so took our traps and set in the woods a mile or so from town and stay at the hotel till we find a place.

I killed a *Lepus aquaticus* & a Bat.
Thompson killed a *Megascops*.

May 5 Went to traps but did not catch any thing save a lizard. Saw one Gray Squirrel but failed to get it. Thompson had no better luck. Found a boarding place just at edge of town, moved and settled in very good quarters.

Got a boat and ran through a canal across the swamp and out on a big marsh. Saw some birds that appeared to be Gallinules. Found one Musk Ratt lous & set traps at it.

May 6 Caught 3 Sitemys but ants had spoiled 2 of them. Shot some birds. Took up traps and set them out in woods & field south of town. Found *Neolama* houses & signaller runways.

Houma

May 7 Caught a Motowee, a Sigmodon
and 3 Sitomys. Shot a Megascops.
Made up skins and finished my report
for Bay St. Louis.
A warm day.

May 8, Sunday. Found an opossum in
a trap but it had lost most of its
hair. Saved only the skull. Got 3 Sitomys.
One is melanotic.

May 9 Caught nothing but Sitomys.
Made up a few skins, packed up and
went down the Bayou Terre Bonne 9 miles
to Rural Retreat, a fine old plantation.
Set out a line of traps, skinned a
gray squirrel and some birds.
The grounds at Rural Retreat are full of
fine old trees covered with moss and
orange trees now full of ripe fruit.
Great quantities of blackberries are
ripe all around the fields and in the
woods.

May 10 Caught a Sitomys and a Didelphis
shot some birds, went out to lake & set
Musk Rat traps. Did not accomplish
much. A very pleasant day.

Houma

May 11 Caught a Sitomys, got a Sciurus & some birds. Tramped across the swamp and started several Swamp Rabbits but could not see them for thick weeds & brush.

Killed 2 little Bats in evening and found a large one on the ground where it had fallen after a fight - evidently. Have to skin the bats because we have no alcohol.

May 12 Caught a Neotoma & Sitomys. Thompson caught 3 Musk Rats and an Oryzomys.

Found save bitter Neotoma houses and set traps for them. One nest is in a hollow sycamore that measures $10\frac{1}{2}$ feet across the hollow at base. It is a thin shell with branches around the edges up about 12 feet. Shot a Neotoma as it ran up a tree from nest at base.

May 13 Caught 2 Neotomas, 8 Sitomys, a Reithrodontomys & a Mus. Thompson got a Fiber and a *Lepus sylvaticus*.

May 14 Caught 2 Neotomas, a Sitomys & a Rattle snake. Thompson got 2 Sitomys & a Neotoma. Took up traps and returned to Houma in P.M. Saturday night.

Houma to Baton Rouge

May 16, Sunday.

May 17 Packed our specimens and wade out report. Thompson went to Mr. Herbert Batons place 4 miles from Houma and caught 87 bats - *Myotis ouys*. Said there were some thousands of them on the rafters and in cracks of the roof of Mr. Batons stable. Walked till after midnight to get out things packed and ready for an early morning train.

May 17 Left Houma at 7:20 A.M. Thompson went to La Fayette, La. I came as far as New Orleans on my way to Washington, Miss. and have to wait till morning for a train. The boats do not go till day-after tomorrow.

Stopped at the St. Charles Hotel. Went out to the lake and did some writing.

May 18 Left New Orleans at 8 A.M. Crossed the river and went up to Port Allen on the T.P.R.R., then crossed to Baton Rouge and had to wait till dark for train to Natchez. The R.R. is washed out.

Natchez & Washington, Miss.

May 19 Arrived at Natchez at 4 A.M.
and went home before the sunrise.
Got a team to take me out to Washington
which is 6 miles S.E. of Natchez.
The country is beautiful, hilly and
fine trees of Pine & Juniper & deciduous
trees. Good fields of cotton & corn.
Found Coleman at Washington. He had
just caught 2 *Sitomys*, a *Neotoma*,
& a *Blariva exilipes*. Set traps &
shot bats in evening.
Cold morning, pleasant day.

May 20 Caught a *Sitomys* and shot a *Lepus*
sylvaticus & Fox Squirrel. Coleman got
2 *Sitomys* and a *Tamias* and some birds.
Shot a *Vesperugo* in evening, but it is
cold and cloudy & not many bats appeared.
began to rain in evening and is cold.

May 21 I caught nothing in my traps,
Shot a *Sciuropterus* & a *Megascops*.
Coleman caught a *Neotoma* & 4 *Sitomys* &
shot an Egret. We each shot a little
Vesperillo in evening.
A clear day and very cool.

May 22 Sunday,

Did not find much in traps. Coleman got several mammals.

May 23 Caught a Neotoma & Rabbit and shot a ~~Scorophaenus~~ some birds. Caught a Coon. Set my traps down the creek in an old nursery.

May 24

Caught 3 *Arvicola pinetorum* (?) and shot 3 bats and some birds. Coleman got a Neotoma & 2 Squirrels & a Rabbit. Reset a lot of my traps.

May 24 Caught 3 *Arvicola pinetorum* (?) and a Blarina. Found Shrew runways in some brushy woods and set traps for them. Coleman caught a Coon & a Neotoma.

May 27 Have worked late night and not written journal for several days.

Do not get many things except bats which are numerous. Have got a few Blarinas & Fox Squirrels & a Tairias. Killed a *Bubo latisima* & a *Caloptes auratus* to day. Got a partially albino *Glaucidium* tracks yesterday. Clear warm weather with a light shower this evening.

Washington, Miss & Natchez

May 28 Caught a *Sitomys* & shot a *Sciurus Carolinensis*.

Reset my traps, packed skins, wrote on report in evening, cleared up, pleasant.

May 29 Sunday -

Caught 4 *Blarinas*

May 30 Caught 2 *Blarinas*, one of a small slender species different from that caught before, and an *Arvicola*. Colcock caught 2 *Arvicolas*. Went to our traps early, took them up, made up the skins and packed our baggage. Started for Natchez at 10 A.M. Had to wait at Natchez over night for a train enroute for Mer Rouge. A hot day, dust deep and soft along road.

May 31 Left Natchez at 6:30 A.M. on the Ft. Scott R.R. Crossed the Miss. R. and proceeded N.W. to Rayville where we have to wait again till 5:10 P.M. for a west bound train.

From Natchez to Rayville the country is all flat and partly flooded. Thick woods of Sweet Gum, Oaks, Hickory, Cypress, Sycamore, elm & other trees cover the country except where cleared.

Monroe to Mer Rouge, La.

Sabal adansonii, and ~~Acandina~~ *gigantea* and Tillandsia usneoides are characteristic. Some large plantations of good cotton & corn lie along the R.R. but over half of the country is unshaded. The land is so low that it is probably unhealthy. The water is just reaching Rayville from a break in the Miss. levee and is in places 3 feet deep and pouring down in great streams.

Left Rayville at 6 P.M. and reached Monroe an hour later and have to wait till 8 A.M. for train to Mer Rouge.

The same flat, low country to Monroe.

June 1 Left Monroe at 8:40 A.M. and arrived at Mer Rouge at 10 A.M. Went out into the country and found a place to board about a mile from town with Mr. Harkness.

Geomys hills and mole ridges are common, set traps.

There are said to be Fox Squirrels in the woods but we did not find any. Saw one from the train as we came along.

Rained hard in the night and in showers most all day.

Mer Rouge, La.

June 2, We got each 11 Geomys, I killed a Fox Squirrel and Colewan a Cottontail. Colewan shot 4 Bats and I one. A cold day so that we wore our coats all day for comfort.

June 3

Caught 10 Geomys, shot 3 bats & got a Mink of a fellow who killed it in the woods - Colewan caught 4 Geomys and shot 8 bats.

Had a mess of fried Geomys for supper and they were good, no bad flavor, were not well cooked but would have been very nice.

June 4 Caught 6 Geomys & bought 3 Moles of darkie boys & shot 2 bats.

Colewan got 2 Geomys & a Gray Squirrel & a Barred Owl & shot 3 bats.

Got letter of instructions.

June 5 Sunday.

June 6, Wrote on my report & packed things in A.M. then decided to make one more effort for Squirrels and not start till tomorrow. Hunted all of P.M. in the pine hills 4 miles west of here. but found no Squirrels. Got caught in a hard rain.

Mer Rouge & to Monroe, La. & Texarkana Ark.

June 7 We hunted all of forenoon and each killed a Gray Squirrel but saw no Fox Squirrels. Wrote on report, skinned squirrel, & packed up in P.M. and left Mer Rouge at 6:30, reached Monroe at 7:30 and had to wait 23 hours for west bound train. A hot day, heavy showers around.

June 8. Had to wait all day at Monroe for a train to Shreveport. Finished up my report and wrote letters. Identified a few plants.
A hot day.

June 9 Reached Shreveport at 2 A.M. Found Thompson and gave him instructions and took a 9:30 A.M. train for Texarkana and arrived there at 2 P.M. Took a long tramp out of town but found the country all thickly settled and no good collecting ground. Concluded to go farther west to some wilder locality.
Have to wait till morning for a train.

From Shreveport to Texarkana the country is somewhat hilly, broken and open. There is not much heavy forest but most of the country is covered with scrubby *Quercus nigra* and *Pinus taeda* & *Whites*. Some brushy thickets, open grassy patches. Larger timber along streams. Some *Geomys* hills along but none at Texarkana. Soil sandy, gravelly, & clayey. Some boulders.

Texarkana to

June 10 Left Texarkana at 8:35 A.M. Scrub-oak & scrub-pine openings continue west of Texarkana to New Boston where is a good sized prairie, broad, smooth and grassy, yellow with flowers. Some marshes on the prairie. Looks like a first rate collecting ground. Should think the prairie was 4 or 5 miles across. Smaller openings & prairies along the R.R. but scrub timber covers most of the land. Some places not settled for many miles - Some good farms of cotton & corn.

From New Boston to Arkove circular wounds are scattered all along irregularly. They are 30 to 60 feet across and 4 to 6 feet high. circular and even in outline, often cover a third of the land. Are all on rolling land & not on flood land. Are just like those so common on the high ground 3 miles west of Mexicali. I can suggest no good origin of these wounds. They are clay soil & can not be dunes. Are too numerous for human work, too large for animal wounds unless made by *Megatherium*. Are too circular and even for icebergs or glacies deposits. Forest trees grow on them. Have not examined the soil structure.

Bought my ticket to Oak Grove, but found no one lived there so went on to Arkove but did not like that & went on to Clarksville & got off. Tramped over the surrounding country all of P.M. but found

Clarksville & to Paris, Tex.

no signs of mammals. The soil is hard and baked & cracked open to muddy & like wax when wet, conditions which exclude ground inhabiting rodents. Set a few traps but with no freshet of success. Shot an Atalapha in evening. Guess I will move westward tomorrow.

June 11 Took the 10:45 train west to
Blissom, then to Reno & then to Paris
where I stopped and set traps and
shot bats in evening. Shot 3 *Atalapha*
wooboracensis & 3 *Vesperugo*.

Caught nothing in my traps at Clarksville
and do not expect to here. The soil is
hard and baked. Most of the country
is grassy prairie or fields. Perhaps
half timbered. Timber & prairie alternate
from Clarksville to here. The large
mounds extend most of the way from
Clarksville to Paris.

Got a set of 4 eggs of the Scissor-tail Flycatcher and saw the bird alive for the first time.
A hot day.

June 12 Sunday, a hot day 88° in my room.
Dont feel well.

Paris, Tex. to Arthur

June 13 Took up my traps, they had not been touched! Shot scissor tails & a Chondestes & made up skins. Failed to get a Sturnella. Was sick all night and am now so weak I can hardly stand up. My eyes begin to turn yellow so I know it is only jaundice. Could hardly drag myself around to get my traps. Saved a few plants. Will take the 6 P.M. train northward. Another hot day.

Left Paris at 6 P.M. & went to Arthur, 15 miles north at crossing of the Red R. and stopped. Shot at bats but got none.

All clay land from Paris to Arthur, some fields of cotton, oats, corn, castor-plant, etc. Most of the way is uncleared scrub-oak land.

Arthur is composed of 6 or 8 little houses on the bank of the Red R. A crew of men are building a saw mill.

June 14, Crossed the R.R. bridge and hunted most all day on north side of river in Indian Territory. Back a mile from river found sandy land above high water level and caught 4 Geomys bursa on it. Shot 4 Gray Squirrels.

1892

Arthur, Tex

June 15 Hired a wagon and dog to go with me hunting squirrels. Killed 7 Fox Squirrels, one black one, the others as usual. They are different from those of Louisiana.

Hunted through the pine & jack oak ridges a few miles S.W. of Arthur. Did not see a Gray Squirrel. 4 of the squirrels were ♂ & 3 ♀, 4 adult & 3 nearly full grown of the year. Stomachs full of nuts & a black substance, probably lichen or fungus.

A hot day. shot 4 bats in evening.

June 16 Left Arthur at 7:40 A.M. reached Ft. Smith at 1:30 & left for Ft. Gibson at 4:30, arrived at Gibson at 7 P.M.

Passed through timbered country, from the river back to Grant, then struck open prairies alternating with scrub oak openings and timbered creek beds flats, splendid grass all over prairies, very little stock or settlement, stations small & far apart.

Steadily climbing up grade till we began to strike rocks and high-pine covered ridges of Rodney. These quite mountainous long ridges rise 1000 feet or so and are covered with thick pine forest, look black. R.R. runs through open parks of splendid grass &

timber of various kinds is abundant along the streams. *Quercus nigra* and *obtusiloba* are the most abundant trees on the hills except where pines take their place.

The pine is rather small and slender, probably has been thinned out for lumber as mills are common along the R.R. It looks like *P. taeda* or *nutans* but I could not be sure.

Elms, *Hicoria*, *Quercus phellos*, *alba* & others, *Acer*, *Fraxinus*; *Platanus*, Sweet Gum, Sour Gum, grow along the flats. did not see Sweet Gum till south of Standley when we strike lower land. not much there.

The vegetation is rank and fresh grass is tall and flowers numerous. The same kind of woods extend all along, on both prairie & timber land, flats and hills, also extend to Ft. Gibson. From Ft. Smith to Gibson the country is rolling, hilly, and flat, timber and prairie, ishleoid soil and vegetation and beautiful country. not much settled.

Fields of cotton at Ft. Smith & Ft. Gibson. rose along the R.R. S. of Smith. Corn and oats are the common crops. Oconys hills first seen at Ft. Smith

Ft. Gibson to Marionville, Mo.

then seen of Gibson. May occur along the road through the Territory but did not see them and do not think they are between Arthur & Ft. Smith.

Reached Ft. Gibson just before dark

June 17 Hunted, set Game Traps. Killed a Cottontail & caught one Pormys. Rained in P.M. so I could not attend to my traps. Got a few birds. Packed skins and stuffed my squirrels from Arthur. Got some good information on mammals from Mr. Nash - a merchant.

June 18 Found nothing in my traps, took them up, packed up and left Ft. Gibson at 10:30 A.M. arrived at Ft. Smith at 1:30 and at Marionville, Mo., at 9 P.M. The forenoon was hot but as we climbed the Ozark Mts. to Fayetteville it grew cool and delightful, probably a change of weather as well as change of altitude & latitude.

Wheat and cherries are common at Ft. Gibson, the first I have seen this year. North of Ft. Smith I began to see fields of barley & wheat at Ringwood (?) and

such other northern crops as rd clover & timothy. Strawberries, grapes, & cherries are raised near Ft. Smith.

A yellow barked Birch grows along streams north of Ft. Smith. Sweet gum extends some north of there but does not reach Rivertonwood. Fayetteville is at the top of the Mts., here I saw the first Canothus and our common "Jack-oak" of Minnesota —

J. coccinea or *tinctoria*, two characteristic northern plants. Saw a single tree of *Populus tremuloides* just north of Seligman. Between Garfield and Seligman the country is very rough with deep gorges, rocky ledges and high, steep ridges all covered with thick oak timber. A good place to collect. Saw a Wood chuck clinging to a wire fence near track. It was evidently tame, was with a couple of boys. Garfield or Greenland might either be good places to collect, but Fayetteville is probably the best point to work.

Saw no Gopher hills between Ft. Smith & Marionville.

June 19 Sunday - Staid at Marionville. Found hazel, Canothus, plantain, poke, & Jack-oak; all northern plants

Marionville to Galena, Mo.

June 20 Took the stage at Marionville at 9 A.M. & reached Galena at 3 P.M. My trunk had not come so I will not hurry through but wait till morning to go out to Powell's place.

For company on the stage I had Dr. ^{T.H.} Jones of Galena and a young man from Ash Grove, Mo. both intelligent men who gave me much information of a reliable character.

A long rough road, over hilly country, very stony timber mostly scrub oak. Many northern plants -

June 21 Mr. Purdy was going out to Marble Cave and kindly offered me a ride.

Left Galena at 7 A.M. and reached Mr. Powell's place at noon. Saw no game along the road though west of the way through unsifted woods and over timber covered ridges. A rough road, crossed a small creek many times.

Went to a wind cave where a strong current of cold air is constantly coming out with considerable force.

In P.M. went into the cave and followed many of the passages for long distances. Found signs of Motomias, & Sittomys, saw no bats but lots of droppings.

Marble Cave, Mo.

Took some dirt ~~out~~ of the Animal Passage but the dust choked us badly. we had no cloth or sponge for our faces.

Saw 2 wild turkeys near the cave but too far away for a shot.

Shot off a few ft bats in evening but did not get any.

Clear & warm, a shower in after-noon.

June 22 Borrowed 3 traps of the Powell boys and set. Hunted some and wrote up some back report. Can not do much till my trunk comes.

June 23 Caught an Opossum in a trap and the dogs found a large Woodchuck. Hunted and looked up a lot of plants -

June 24 Killed a Tamias and a Gray & a Fox Squirrel. My trunk came in P.M. & I set out some traps - Rained hard, was out and got wet.

June 25 Caught a Mole. Set 40 traps in the cave & helped get out dirt and bones from the animal passage. Put up the skins of specimens taken before my trunk came.

Marble Cave, Mo.

June 24 Sunday Nothing in any of my traps.

June 27. Caught one Neotoma. Had it cooked and it was very good. Not in any way unpleasant. None of my 40 traps in the cave sprung or the bait touched. Reset a few traps outside of cave & worked in the bone tunnel for awhile.

July 2 Haven't caught much for several days. Have tramped over the ridges for long distances but mammals seem scarce. Caught one Sitomys but something ate it. Caught an old Skunk yesterday near entrance to Marble Cave & caught 2 young at same hollow tree today - Have killed a few Squirrels - caught a few Neotomas. Nothing touches the traps in cave. Blackberries & blueberries are getting ripe and are quite plenty.

July 4. Killed some squirrels & birds. Hunted most of the day. Went to the traps in cave but found nothing in them.

July 8 Have all my things packed & 4 boxes of specimens ready to ship. Started for Galena with Will Powell. Stopped off hotel for the night. Went to call on Dr. Jones & got some accurate measurements of the cave. He has surveyed it carefully.

Galena to Marionville, Mo.

and is a man of intelligence & seems reliable. Wrote on my report in evening but did not finish it.

Rained hard in P.M. & we got some wet.

July 9 Left Galena on stage at 9 A.M. & reached Marionville at 4 P.M. Finished my report before taking train at 8 P.M. for Greenfield.

Reached ~~Greenfield~~ South Greenfield in middle of night & went to hotel.

July 10 Took a long tramp about South Greenfield and inquired about the country & animal life. Found a hard clay soil & no signs of animal life such as I want, so took the 10 A.M. train for Golden City a little farther west. This does not promise well but I will try it a few days.

July 11, Monday - Started out early with gun & bag of traps. Asked lots of questions among the farmers. Followed a load of hay and caught one young *Amicala* under a hay-cock, set traps around in the field but did not find any good signs. Got a young Rabbit & 2 Gray Squirrels.

Golden City, Mo. to Pittsburg Kansas

July 12 Shot 2 half grown *Spermophilus*
blivatus & caught 2 in traps.
Caught an *Opossum* with 3 young
in pouch.

July 13, Got one *Spermophile* & shot some
birds & a bat. Feel tired and half
sick all the time, Am either bilious or
have malaria.

July 14 Caught one more *Arvicola*.
Took up traps and packed up and
took the 11:10 train west to Liberal.
Stoped at Liberal & tramped around some
but can find no signs of Geomys
nor hear of any.
Will take the next train S.W. to
Pittsburg if the train ever comes.
Am waiting for it & it is now 6 hours
late. May stay at Pittsburg but not
unless I find some prospect of animals.
Reached Pittsburg at 6 P.M. & had to wait
till 8, so bad time enough to take a tramp
and see that it offered a poor prospect
for collecting. From Liberal to Pittsburg
there are but few farms. Coal is found
all along. The land is all prairie, quite
level and with a splend growth of grass.
large tracts are fenced & used for pasture.
Minden is a swaky little coal town
on a big, smooth, grassy prairie.

Chetopa

Pittsburg is a coal mining & smelting town, surrounded by grassy prairies & very few farms.

Left Pittsburg just at dark and did not see the country thence to Chetopa.

July 15, Woke up in a new place, Chetopa, Kan. Took my gun and tramped all of forenoon but soon found that no Geomys nor many other mammals occur here. Killed a Collertail & a *Sturnella magna* & a *Lanius*. Saw a *Milvulus fasciatus*, Killed some other birds to see what they were eating.

The country is prairie except along the Neosho River, where it is wooded.

Most of the land, out for 3 miles from town at least, is cultivated. Some large pastures remain in native grass and are little changed from the original prairie. Wheat, oats, corn & clover and timothy hay are the principal crops. Much fruit is raised, such as apples, peaches, pears, plums, cherries, and small fruits.

There is hardly a trace of Austroriparian life here. One *Milvulus fasciatus* and the *Catalpa bignonioides* are probably the most southern forms occurring.

A hot day, 93° at 3 P.M.

Coffeyville, Kansas to Cedarvale.

July 16 Came in late last night and this morning started out to prospect.

Went 3 or 4 miles S.W. of town well out on open prairie. Found signs of *Arvicola* & *Spodomys* & Rabbits, but Geomys does not seem to be here. Found no signs of them and no one here knows them.

Saw *Otocoris* & *Bartram's* Sandpiper & *Chondestes*, all prairie species.

Have to wait till 5 in the morning for a train west.

Rained hard at noon & some more in evening.

July 17 Left Coffeyville at 6 A.M. & reached Cedarvale at 8:20 A.M. Followed creek valleys most of the way. Found the soil rich & yellow, crops big, farms thick & prosperous, small towns frequent.

Timber & brush & big weeds along stream valleys, prairie high & rolling, tall grass. Hills often rocky, some 200 or 300 feet higher than creeks. Sandstone, fossiliferous lime rock, & shale common.

Saw *Welwitschia* *biplinna* in blossom near Peru, in a little pond. Saw leaves in another place. Saw several *Welwitschia* *erythrocycla*. Strained my eyes for Geomys hills but saw none.

Cedar Vale, Kansas

July 18 Telephoned my whereabouts.
Hunted & set traps. Went across the creek south of town & set traps along the rocky ledges and over the grassy hills of the prairie. Killed an *Ammodramus s. purpolidus* & an *Antrostomus carolinensis*. Shot a *Coccyzus americanus* for bait & found its gizzard full of green worms, saved them. Found signs of *Meotona* & *Arvicola* & set traps. Tramped a long way back over the prairie without finding much. Climbed to the top of the highest hill near here & estimated it at 300 feet above the creek.

July 19 Caught a Possum & some *Neotomas* and a *Sitomys* & shot an *Antrostomus*. Set more traps.

July 20 B. H. Dutcher arrived.
Caught 4 Possums, 5 *Neotomas*, 2 *Sitomys*, & shot a Gray Squirrel. Made up skins & rest part of my traps.

July 21 Caught but little. Packed some specimens, shot one bat in evening. A hot day 95° at 6 P.M.
Will go west in morning.

July 22 Left Cedar Vale and arrived at Belle Plaine about noon.

Belle Plaine, to Cairo Kansas

July 26 Have been trapping on the low land about Belle Plaine for several days without getting much but Geomys & Sitomys. The country is all in fields and crops except a few pastures and along the railroads.

Got a team & buggy and started early in morning for a place where there are said to be Prairie Dogs about 13 miles north & west near Derby.

Crossed to east side of Arkansas R. passed through Mulvane, then struck high, rolling prairie with clay soil.

Found the holes of Prairie Dogs on the farm of Mr. Farrel, a mile south of Derby, but saw no P.D.s. There are said to be others near by but all in small groups. Got some birds & other things, a *Lepus sylvaticus* & *S. 13lineatus* which Dutcher killed.

Returned to Belle Plaine & packed up.

July 27, Left Belle Plaine at 10 A.M., had to wait at Wichita till 5:50 P.M. and then reached Cairo, Pratt Co., a little after dark. Followed up the Arkansas Valley most of the way to Wichita so there was not much change of country. Then crossed it going west and struck

Cairo, Kansas

high, clay prairie some five miles west of Wichita. Saw Geomys hills on sandy bottom land west of Arkansas River, but none on the clay prairie. Found them again on sandy creek bottom west of Cheney and some on a clay ridge west of Murdock. Near Kingman the soil becomes more sandy and Geomys hills are common to Cairo.

Prairie Dogs, saw a colony of some 40 acres of P.D.s between Garden Plain & Cheney and Burrowing Owls with them, also a few Cynomys ~~at~~ west of Murdock.

Lepus texanus, saw 14 from Cheney westward followed the valley of South Fork of Ninnescah River most of the way from Kingman west. Sand hills and rolling prairie & river flats & marshes. Very few trees, only stunted willow & cottonwood.

July 28 Engaged board with Mr. Grier, near the station. Took traps & went across to north side of Ninnescah R. & set traps along edge of sandhills. Caught a Glaucomys & an Arvicola & in P.D. went about $\frac{1}{2}$ miles west to a P.D. town. Shot 2 Cynomys & a Lepus texanus.

CairoPoncaJuly 29

Caught 3 Geomys + shot some birds. Basil Caught 2 Perodipus + a S. Blineatus + shot a Lepus texanus + some Night Hawks.

July 30

~~Aug. 1~~ Caught a spilogale + shot 2 Jack Rabbits.

~~Aug. 31~~ Caught another spilogale

Aug. 2 Left Cairo at 5 A.M. and stopped at Garden Plain. Set traps and hunted. Got 4 Geomys + a Prairie Dog + a Lepus sylvaticus + a Spermophilus Blineatus + caught a young Procyonthus paradoxus in my hand. Skinned the specimens, made 2 skeletons.

Aug. 3 Left Garden Plain at 6:45 A.M. made close connections at Wichita and started south from there on the S. F. arriving at Ponca station at 11 A.M.

Walked 3 miles to the agency where I found Preble at Mr. Bevord's place.

The Indian police had scared Preble out of doing any work till I came. Got our things out as soon as possible and set out traps. Could find no Spermophiles to use bi-sulphide on, though their holes are common + I heard one.

Ponca to Gainesville

Aug. 6 Left Ponca at 11 A.M. and reached Oklahoma City about 2 P.M. Preble with me. Went out hunting & looking over the country. Killed a Sciuropterus & shot at bats. Found plenty of timber along the stream. Oklahoma City is close to the N. Fork Canadian R. Rolling prairie extends back except along streams. Some ridges are covered with scrub oak.

Aug. 7 Took a long walk & concluded to let Preble stay and collect for a few days. I started on again at 2 P.M. and reached Gainesville, Tex., at dark. Took watch all along the road. Believe the line between Austroriparian and Carolinian strikes across south of Purcell. The same prairie plants that we found in Kansas came down as far as the Canadian R. North of Purcell & were not seen south of them.

We followed the valley of the Washita R. for a long way, and south of Davis struck into rocky knobs and rough country. Dougallity seemed an unusually promising locality, a little station in the woods close to the river with rocky ridges on two sides and prairie back of the ridge on the S.W. Decided to have Preble stop there on his way down.

Gainesville Tex.

Aug. 8 Found Ragsdale and talked with him awhile. Got a place to stay 3 miles N.E. of Gainesville with Mr. J.L. Hayes, on the prairie a mile from the Cross Timbers.

Aug. 10 Dutcher arrived

Aug. 15 Have been a week at this place and will leave today. Have not caught much. Small mammals are very scarce. Skunks, Mink, & Possums & Coon are numerous. Ragsdale seems afraid to give me any positive information for fear I will make some use of it. Thinks he ought to be paid for the bird reports he has sent in.

We have worked over into the Cross Timbers 2 or 3 miles and Dutcher made a trip to and across the Red R. The ants have eaten several of our best specimens of small mammals. The place has not proved profitable. Dutcher now goes south, stopping a few days near Ft. Worth, then out on the Brazos River. I work N.W. Preble is at Dougherty and Coleman at Council Bluffs.

Left Gainesville at 5 P.M. and it grew dark just before I reached

Wichita Falls, Tex.

Henrietta. Arrived at Wichita Falls at 10 P.M. Passed through the upper Cross-timbers between St. Jo and Belcher then the prairie seemed boundless on all sides, timber & brush along a few streams. Saw a few Mesquits just as we passed Belcher & they seemed common thence on. It grew dark after we passed Doss. Had to wait at Henrietta & reached Wichita Falls at 10 P.M. put up at the St. Elmo Hotel.

Aug. 16 Took all of the forenoon for writing letters and finishing report. In P.M. went out and found lots of Prairie Dogs & shot a *Spilogale* *bliventer*, set traps.

Aug. 17 Caught only a *Spilogale*. Tied it to a long string, put it in a hole and killed it with bisulphide in 6 minutes. Tried to catch P.D.s to experiment on but did not catch any! Will go down to Seymour & stay over night, then come back here & try the P.D.s again. Killed a Cottontail. The country here corresponds in dryness and general appearance to the plains about Cheyenne, though good crops are raised along the river flats. Cottonwood timber

grows along the rivers some places a mile wide. Mesquits (*Prosopis*) grow in the washes and on low benches. The prairie grass is short & scattering. much of it a little gramma.

Left Wichita Falls for Seymour at 3:20 P.M. and arrived there at 6 P.M.

Travelled S. W. across mesquit covered plain ^{51 mi.}. Prairie Dogs were abundant all the way, saw 9 *Lepus sylvaticus* & 1 *L. texianus*. Counted 8 *Neotoma* houses in one patch of mesquits, 9 in another, & 12 in another. The nests are built up around bushes of mesquit or independently & look like Muskrat houses. I estimated the number of P.D. holes at 5 to 10 to the acre.

(Should think they would average 5 to the acre all the way including places where there were none! Never saw so many P.D.s before, nor so evenly distributed.

Could see no holes in corn fields but in new stubble fields they were common.

Seemed to be more in the older fields.

Saw a Cottontail run to P.D. holes & get down in partly out of sight.

The mesquits are scattered over nearly all of the country, look like orchard trees in places, rarely over 10 feet high.

Went out for a short hunt before dark, but

found no signs of small mammals &
set but 2 traps.

Aug. 18 Got up early & went hunting
before breakfast. Found tracks of Kangaroo
Rats & a little Perognathus in sandy banks
along the Brazos River. Saw nothing
in the mammal line save Cottontails &
P.D. No Cottonwoods along the river here.
The largest tree is the little Cedar Elm -
rarely 20 feet high & scrubby. Prosopis
is abundant. A species of Xanthoxylum
is common. & a Lyssium & Cactus
& Solanum rostratum.

Crops of corn & grains & vegetables are
raised on the prairie where it seems
like a dry desert. This year is dry
but they say for 4 years crops have been
good along the Brazos.

In returning from Seymour to
Wichita Falls I saw nothing new save
a very pretty girl and the usual number
of Cottontails (7) & Prairie Dogs by ~~hundreds~~.

Reached Wichita Falls at 11 A.M.
& in P.M. set traps for P.D.s. & when
caught experienced trouble with
hi sulphide. Caught 3 & experienced
successfull on two. The other got stuck
in the hole and I broke the string trying
to draw him out.

Wichita Falls to Clarendon, Texas.

Aug. 19 Didn't catch any P.D.s. got one cottontail.

Aug. 20. Caught 3 Cynomys & a Neotoma. Gave them all bisulphide. Could not get one P.D. out of the hole, broke the strings. Partly resuscitated one P.D. but it finally died about 3 hours later. The skunk went down a P.D. hole, bisulphided him but let him out too soon & he partly revived, but did not stink till after I let him to him the second time. I then gave him another dose & cut off his head.

Left Wichita Falls at 3 P.M. for Clarendon, arriving there at 9:30 P.M. It grew dark as we crossed the P.D. T. Fork of Red R., but Lower Sonoran came up that far pronouncedly with lots of Prosopis, Lysimium, Opuntia & other Sonoran forms. At the river we met an Aitchisonia, probably of Upper Sonoran range, but it grew too dark to see anything. Cynomys abundant all the way. should say they would average at least 2 to the acre throughout the country. Geomys hills were common in the Peace R. Valley near Vernon and in the P.D. T. Fork of Red R. Valley from Childress west to river. Not seen save in these localities, where it is sandy. Most of

Prairie has a hard, or clay soil. The very pale little Cottontail was abundant all the way. At least 30 seen. Saw 5 *Lepus texianus*. Saw one *S. Blineatus* at Hazard.

The P.D. Fork of Red R. is a dry sand flat about half a mile wide. Is probably the main branch of the Red R.

I ought to have stopped at Memphis but a distorted R.R. map caused me to come to Clarevdon. Probably the geese molt near Memphis.

A delicious change of weather from the heat at Wichita Falls to a cool, fresh air at Clarevdon.

Aug. 21 Sunday - staid all day at

Clarevdon, tramped over the country some, found no signs of Geomys or Dipodomys, saw *Lepus tex.*, *L. sylvaticus pallidus*, & holes of P.Ds. The slender leaved *Artemisia* is abundant. *Prosopis* bushes are quite common in places but smaller than usual.

Saw a Sparrow Hawk & Shrike & lots of *Otocoris*. Took a 9:30 P.M. train for Washburn. Could get no train in daylight.

Washburn, Tex.

Aug 22 Woke up in a place I had not seen. Found myself on the smoothest, biggest prairie I ever struck. Not a bush or weed a foot high to be seen in any direction. Short grass and smooth ground. Surface in long gentle swells. Shot a few birds, set traps. Wrote on back reports.

Aug. 23 Caught an Onychomys & three *Peromyscids*. Made up skins & finished my reports.

Aug 24 Went to traps early. got 2 *Perognathus*, an Onychomys & a Sitomys.

Got a saddle horse & started for the cañon of the P.D. Fork of Red R., 13 miles south of town. Struck the cañon about 3 miles west of straight south. Could not get my horse down it so left him and climbed down to the bottom. Found lots of new and strange plants. Collected some.

Found no mammals, but saw Coon tracks in the mud of river bed. Saw a few pocket gopher hills on prairie. Coming back I saw 3 Antelope & took a couple of shots at them at long range. Should like to trap in the cañon. Cattle & horses run in it. There are but few places where you can get down

Panhandle, Texas.

Did not get back to Washburn till 7 P.M.
Then packed up and left on the 11 P.M.
train for Panhandle, about 15 miles north
of Washburn.

Aug. 25 Found myself in the little town
of Panhandle, still on the Staked Plains
and the same kind of country as at
Washburn. Got my traps to hotel and
put up some specimens brought along.
Wrote up my notes to date.
In P.M. tramped over the prairie but
found nothing new.

Mr. Edward Shy, a very well informed
man with whom I stopped gave me the
skin of a Lynx besides much very
good information about the country &
animals.

Rained in evening. Am ready for
an early start in morning for
Canadian.

The altitude of Panhandle is 3460 feet.
Water is reached at from 300 to 400 feet.

There is a small colony of Crows near
town.

Panhandle to Canadian, Tex.

Aug. 26 Left Panhandle at 4:50 A.M.
before it was light enough to see the country
but it soon grew light.

After passing Pawpaw we struck the head
of a small water course and followed
down it till the country became quite
broken and cut through by channels at
Coddington. Off at the sides square topped
buttes and table lands reach back and form
a broken edge to the Llano Estacado.

At Miami there is quite a wide river-valley
with a few cottonwoods & willows scattered
along the dry river bed. The soil becomes
more sandy. Grass is taller. A few groups
hills appear. Settlements are small & scattered
and ranches few. Miami is a nice little
place of a dozen houses & a little hotel.

Reached Canadian at 8 A.M. but my trunk
was put off by mistake at Miami. had my
gun and 9 traps with me so could do some
work. Hunted, set my traps & collected a few
plants. Caught one Geomys & shot a Geococcyx
& some other birds. A little water is running
in a channel of the sandy bottom of the
Canadian, owing to last night's rain.
The valley is wide and flat. sand dunes
skirt the river on both sides. The valley is
all sandy. The prairie back of town is a sandy
clay. The bottom of the deepest channel of the river is clay.

Canadian & Woodwards

Aug. 27 Only caught 2 Geomys.

Aug. 28 Caught 2 Perodipus, 3 Geomys and a Spilogale. Killed the Spilogale with Carbon disulphide & it did not stink. Dug a hole about 10 inches deep in the ground near it dragged it in trap to the hole and tumbled it in. threw grass over the hole and poured in bisulphide & in 6 minutes took out Spilogale dead.

Aug. 29, Left Canadian at 9 A.M. and reached Woodward at 1 P.M. Crossed the wide sand bed of the Canadian River and struck into sand-hill country. Crossed a few small creeks with scattering trees (Cottonwood & Cedar Elm & Willow). Most of the country is sand-hills or rolling prairie covered with splendid grass. Only a few strips of clay soil crossed. Very few ranches seen and but 2 small stations.

The train scared up 3 flocks of Pinnated Grouse, seemed to be 8 or 10 in each of two flocks & I saw 5 in the other. Saw no other birds of note.

Geomys hills were common all the way, of Prairie dogs I saw but two small colonies.

Woodward, Oklahoma

Artemisia filifolia was abundant all along except on clay soil. *Amorpha* was common part of the way. Other characteristic plants noticed were - *Oxytropis lamberti*, *Baptisia*, *Poor Yellow* *temuiflora*, *Argemone platiceris*, *Solanum rostratum*, *Asclepias verticillata*, *Ipsowea leptophylla*, *Euphorbia* (of 3 species), *Esigeron* (collected), *Solidago*, *Cocculus hirsutus*, *Opuntia engelmanni*, *Rhus aromatica*, *Grape*, *Cylindropuntia occidentalis*, (*Populus tremuloides*, Willow along streams)

The grasses are the most characteristic plants and in places nearly the only ones.

At Woodward the country is the same, rolling, sandy prairie and sand ridges near the rivers. A few scattering cottonwoods along the river. Set traps, killed a *Lynx texianus* & caught a *Geomys*. Finished up the skins not made up before starting. Rained some, cold all day so I went a coot hunting.

Aug. 30 Caught 2 *Perodipus* & 3 *Geomys* & an *Oryzopsis*. Found the skull of a *Spermophile*, but saw none though they seem to be common. Killed a *Geomys* with bisulphide & tried it on another without

Woodward to Kiowa

success. Think I have proven that it is not always a sure kill for Geomys. Their holes branch and run horizontally and the Gopher may fill the hole with dirt back of him.

Made up skins, packed up & started for Kiowa, Kansas, at 12:30

After crossing the North Fork Canadian River the country did not change much till we struck the little cañons running toward the Cimarron River. These were full of Junipers, Cedar Elm, & a scrub oak. Ran down a long grade among clay buttes and badlands into the Cimarron Valley. The bottom of the valley is flat, sandy, several miles wide, covered with salt grass and sporobulus. Alkalie is abundant. The river bed is a great stretch of sand, dry save a little stream of muddy water near the edge.

Mesquites are abundant through the Bad land part of the valley and all up the slope on the south side. Great drifts of clear sand 40 or 50 feet high extend along the north side of the river. Elms, Cottonwood, Walnut, & Alters, grow along the south side in patches. The trees are small & scrubby. Wagnoka is not far from the river and I might have stayed there with the telegraph operator if I had known about it. After passing Eagle Chief, a water tank &

Kiowa, Kansas

sign board, the country became more level, just prairie all around as far as you can see. Left Hutchinson soon after crossing the Cimarron and some other plants. - About the same to Kiowa.

Geomys abundant all the way & also Cynomys. Perodipus holes were common whenever there were sandy banks. Saw Marmots. Saw a Marmot at the Cimarron River, 6 of Salt Fork of Arkansas, 7 more at Kiowa. Reached Kiowa at 3 P.M. Went out & set some traps. Caught a Geomys & shot 2 Spermophiles.

Aug. 31 Caught another Geomys & an Onychomys & a Spermophile. Shot three Spermophiles & 2 Prairie Dogs. Took up my traps. Skinned things and packed some specimens.

Sep. 1 Finished packing specimens & trunk and started for Wichita on the Mo. Pacific train at 1:10 P.M. Crossed a river - Salt Fork I suppose just after leaving Kiowa. Perodipus holes were common along its sandy flats. Geomys hills were abundant all along from Kiowa to Conway. Spes. but none

Kiowa to Wichita

seen from there to Wichita. Where the Gophers were the soil was sandy, where they were not seen it was clay. *Cyrtomium* was common from Kiowa up towards Conway Springs but not seen farther on.

Zenaidura naevia was in stubble fields by thousands. The flocks were dense for many acres in extent.

North of Hazelton I saw the first *Amorphia cuneata* seen in coming north except a little along rear Glazier. North of Anthony it became abundant and a characteristic plant. Is probably the best California plant of the plains. *Oxytropis lamberti* was scattered along west of the way.

The country from Kiowa to Wichita is all prairie, good land, nearly all fenced and under cultivation or pasture. Crops are good, good farms and fairly good farm buildings. South of Conway Spgs. it is mostly sandy soil, south of there mostly clay except the sandy river bottoms of the Arkansas R.

Sep. 2 Left Wichita last night at 9:45 and this morning it grew light as we reached Osawatomie on the Mo. Pac. R.R. enroute for Kansas City & St. Louis. From Osawatomie to Kansas City I saw no Geomys hills nor any till we passed Holden. Between Holden and Sedalia I saw Geomys hills in a number of places. Then no more on the way to St. Louis.

East of Warrensburg was a patch of level ground covered with the mounds so common farther south, perhaps 40 acres of them.

After passing Jefferson City we followed down the Mo. R. west of the way to St. Louis and I rode much of the way on the platform to watch for Australoparian plants, but failed to see one good one.

Pawpaw, Persimmons, & Zelkova zelkiona were all that suggested the zone & all of these lay far into Carolinian. Elms, Ironwood, waterbeech, Bass-wood, Sycamore, Honey locust, Quercus rubriburrgis, prunus (?), umbra, macrocarpa, Alba and others were common. Hickory, walnut, cottonwood, Acer dasycarpum, & other trees were common.

is.

6.

Proff. W. Troegle - Chatagua, Miss. via Bay St. Louis.

Gustave Kohn - 14, Coronation St., New Orleans -

William Hall, Houma, La. Terrebonne Parish.

Rodney "

Andrew Van "

Ralph Bisland "

Levi Marsh, Washington, Miss.

Misses Anna & Kate Bailey " (Dempsey Bailey)

Mr. White, Mrs. Rouge, La.

Mr. Mathews, Arthur, Tex.

" Stuart "

Dr. T. H. Jones, Galena, Mo.

Mr. Truman S. Powell "

William Powell "

Waldo "

Mr. Grier, Cairo, Kansas.

Jack Burrlard, Ponca Agency, O. T.

G. H. Ragsdale, Gainesville, Tex.

J. L. Hayes "

Mrs. Willhart "

Mr. Edward Shy, Panhandle, Texas.

Mr. Clarkson, Woodward, Okla. Ter.





